

bears large seeds which were used as food during the 1877 famine, *lohora* a kind of *Andropogon*, is not used as fodder, *bimba* is supposed to be a variety of *lohora*, *gávti náchni* or wild *náchni* is a variety of *Eleusine*, *kavdyáche phombi* also called *bhojráche gavat* and *kolya* or *jangli rála* is a kind of *Panicum*, and *kusliche gavat* or *gávti síva* whose seeds are eaten is probably the *Panicum frumentaceum*.

Besides the above, there are the Lemon grass *cha gavat* *Andropogon schoenanthus*, which with ginger sugar and milk is used as a drink in fevers and colds, and the scented *Andropogon muricatus* which is used in making wind screens and fans.

The chief Ferns are: *Adiantum lunulatum* and *A. capillus-veneris*, two varieties of maiden hair, growing in moist shady places, the Silver Fern *Cheilanthes farinosa* and *C. tenuifolia* found chiefly in the western hills, two brackens *Pteris cretica* and *P. pellucida* found at a height of more than 2000 feet, the Oak Leaf Fern *Aspidium cicutarium*, *Lastrea bergiana*, *Hemionitis arifolia*, *Gymnopteris contaminans*, and the Royal Fern *Osmunda regalis*. The Tree Fern is occasionally found and a shrubby *Alsophila* occurs among the western hills; so also do a few varieties of the *Trichomanes* and *Ophioglossum*. The *Pleopeltis membranacea* is found growing on trees.

Of the Club Moss family or *Lycopodiaceæ*, *L. selaginella* is seen in shady hill sides and *L. clavatum* in marshes. Beautiful mosses are found in the hills near Jámboti and the Ámboli pass.

With care many European fruits and vegetables can be grown in Belgaum. The Reverend J. Smith, of the London Missionary Society, has grown English apple and pear trees, but the pear trees do not bear. Peaches and strawberries succeed with care, while the raspberry and Cape gooseberry *Physalis peruviana*, grow of their own accord after they have been once planted.

A very large number of English flowers have been grown from seeds or from cuttings. Among the most successful are *Achimenes*, *Amaranthus*, *Aralias*, *Arbutilons*, *Arums*, *Caladiums*, *China Asters*, *Balsams*, *Begonias*, *Bignonias*, *Bonganuvillias*, *Camellias*, *Cannas*, *Coryopsis*, *Coleus*, *Crotons*, *Dahlias*, *Fuschias*, *Gardenias*, *Geraniums*, *Gloxinias*, *Heliotropes*, *Hoyas*, *Iresines*, *Maurandias*, *Mignonette*, the *Marvel of Peru*, *Nasturtiums*, *Passion Flowers*, *Phloxes*, *Pinks*, *Poinsettias*, *Roses*, *Sweet Peas*, *Violets*, and *Zinnias*. Of European vegetables, cabbages are grown all the year round, but thrive best during the cold weather. Cauliflowers are fair but never very large. A continual supply of peas may be kept up but during the dry months they want much care. Nolkohl and turnips are good if carefully grown. French beans, beet, lettuce, carrots, Jerusalem artichokes, asparagus, celery, parsnips, radishes, small onions, tomatoes, cucumber, and water-cresses all thrive.

Cattle are mostly bred by the Dhangars, who live chiefly in the forest tracts of the Khánápur and Belgaum sub-divisions. A large number of cattle are brought for sale from Maisur and other distant places. The principal cattle marts are Nipáni, Báil Hongal, Gokák, Belgaum, Kitur, and Nandgad.

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Grasses.

Mosses and  
Lichens.

Exotics.

Domestic  
Animals.

## Chapter II. Production.

### Domestic Animals.

#### Donkeys.

Of MAMMALS, Elephants are used by the Commissariat Department for transport purposes, and by a few rich natives for show.

Donkeys are used chiefly by Vadars for carrying their camp-gear and stones, and their charcoal, of which they are the sole makers. Beldárs or stone-masons and potters also keep asses for carrying their wares and washermen keep asses for carrying their clothes. The price of a good four-year old donkey is about £2 (Rs. 20).

#### Dogs.

Dogs are chiefly kept by Bedars and Vadars, who use them for hunting, and most villages have generally some ownerless pariah dogs. The dogs kept for sport are of the pariah breed but are better fed and larger than the ordinary village dogs. They have good noses, and sufficient pace and endurance to run down pig, the chief object of the chase, and keep them at bay until the hunters come up. They are unable to run down deer in a fair course. But by surrounding them and letting the dogs in from all sides, *sámbar*, *chital*, and other deer are sometimes brought to bay and killed.

#### Horses.

Besides by European residents, among natives, Government officials, merchants, and others of the rich and well-to-do classes keep horses for riding, driving, and carrying loads. They are fed on gram, *kadbi*, grass, *masála*, and *bájrí*. Country-bred or *deshi* animals are seldom over fourteen hands and generally under thirteen. They are wiry little animals able to do a great deal of work on very poor food and to stand exposure; but they are ugly, vicious, and obstinate. Their price varies from £2 to £20 (Rs. 20-200).

#### Mules.

Mules are used almost exclusively by the Commissariat. They have lately been employed in the coaches which run between Belgaum and Dhárwár.

#### Camels.

Camels are used almost solely by the Commissariat. A few are kept by rich families for carrying loads. They are fed on shrubs, grass, gram, and *kulthi*, and cost £5 to £20 (Rs. 50-200).

#### Pig.

Pig of a lighter-coloured smaller breed than the wild pig are reared by Native Christians, and by Vadars and other low-caste Hindus. They are dirty feeders and are generally the only village scavengers.

#### Buffaloes.

Buffaloes do not thrive on the Sahyádris though a few are kept in most villages. The best buffaloes come from Sampgaon and Gokák and the country to the east. She-buffaloes, which are bred by cultivators and milkmen, have their first calf at the age of five and go on bearing till they are about sixteen. They are of four breeds, *gavli* or *hanbari* so called because they are reared by milkmen of the Gavli and Hanbar castes, *nagdi*, *javári* or *deshi* that is local, and *dhangari* so called because they are kept by shepherds or Dhangars. The *gavli* breed, which is weaker and smaller than the *nagdi*, have slender bent horns, and the *nagdi* breed have long straight horns. Except that it is taller and stronger the *dhangari* breed differs little from the country breed. When in full milk a good she-buffalo gives five to ten quarts (5-10 *shers*) of milk a day and keeps in milk for ten months at a time. The price of a milch buffalo, which has just calved, is about £2 10s. (Rs. 25) if she gives three quarts (3 *shers*) of milk a day, and £1 (Rs. 10) more for every quart above three. He-buffaloes begin to work when

four years old and are used for ploughing, draught, and burden. For heavy work a pair of he-buffaloes are often kept and are most useful on account of their great strength and, when well broken, on account of their steadiness. Though slower than oxen they are much more powerful, being able to pull nearly double the weight on heavy ground. Their great defect is that they cannot stand the sun; they must be worked in the early morning or evening and are so useless when the sun is high that the husbandmen sometimes plough by moonlight. The trade between Sávantvádi, Goa, and Belgaum is carried on almost entirely by pack bullocks and buffaloes, which take down grain, fruit, and tobacco, and bring back salt, coconuts, and dried fish. The price of a draught-buffalo varies from £3 to £5 (Rs. 30-50).

Cows are found all over the district. Those living on the Sahyádris are smaller than those of the more level country and give little milk. The breed further inland is on the whole better fed and larger; but in all parts of the district small cattle always far outnumber the large. Cows first calve when three to four years old, and go on bearing till they are about fifteen. They feed on grass, millet stalks, cotton seeds, and oil-cakes. A good cow when in full milk gives about four quarts (4 *shers*) of milk and continues in milk about six months. The price of a young full grown cow varies from £1 10s. to £4 (Rs. 15-40). There are eight breeds of bullocks: *sorti*, *mudla*, *kundalvari*, *nagdi*, *dhangari*, *khillári*, *hanabari*, and *chilhar*. Of the first four the *sorti* or South Káthiáwár bullocks are the strongest and largest, about 13½ hands at the shoulder. They have thick black horns, large ears, and long thick tails. Though they are slow, no team for ploughing is considered complete without one or more pairs of *sortis*. The *mudla* bullocks are strong, active, and of middle size, and have straight long horns, slender tails, and small ears. The *nagdi* bullocks are short, about ten hands at the shoulder, stout, and active. They are found in numbers both in the plain and hilly country. Though useful and hardy they are not so strong as the *sortis* or *mudlás*. The *kundalvari* bullocks, the weakest of the four breeds, have large ears, long tails, thick hair, and bent horns. The *dhangari* and *khillári* bullocks differ from the *hanabari* and *chilhar* bullocks by having longer faces, and being stouter, taller, and larger. Bullocks are generally reared by the cultivating classes and are put to work when they are three years old. A pair of *mudla* or *nagdi* bullocks ploughs four acres of land in six days, while three or four pairs of *sorti* and *kundalvari* bullocks, working together at one plough, take ten days to plough an equal area of land. A pair of bullocks of the *sorti* breed costs £6 to £20 (Rs. 60-200), of the *mudla* breed £5 to £20 (Rs. 50-200), of the *kundalvari* breed £3 to £10 (Rs. 30-100), and of the *nagdi* breed £2 10s. to £8 (Rs. 25-80). On a fair level road, a pair of good-well-fed oxen can, as an ordinary day's work, draw a load of half a ton sixteen miles a day. For carriages, or *dhamanis*, fast trotting bullocks of the Maisur breed are often used, which sometimes cost as much as £30 (Rs. 300) a pair. Pack-bullocks owned by peddlers and traders

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Domestic  
Animals.  
*Buffaloes.*

*Cows.*

## Chapter II. Production.

### Domestic Animals.

#### Goats.

carry about 200 pounds (8 *mans*) of grain or cloth packed in gunny bags.

Goats are kept by all classes except Bráhmans, Lingáyats, and Jains. They are of four breeds, local, *kumyadu*, *kui sheli*, and *dhangari*. The country breed has longer legs than the *kumyadu*, and the *kui sheli* goats are short and white, and yield specially good milk. Goats are chiefly kept in villages near bushlands and are most numerous in Gokák. The price of a full-sized she-goat varies from 6s. to 16s. (Rs. 3-8) and averages about 8s. (Rs. 4) for one in full milk which gives about a quart (1 *sher*) of milk a day. Some goats give as much as two quarts, but most do not give more than three quarters of a pint to a pint and a half.

#### Sheep.

Dhangars breed three kinds of Sheep, country, *kenguri*, and *yelga*. Country sheep are either white or black, and their wool is somewhat stronger than the *kenguri*'s wool. The *kenguri* sheep have red soft wool. The *yelga* sheep is either white or red. Sheep are reared solely in the east, the climate of the west being too damp for them. They are sheared twice a year, in June and in December, and their wool is made into blankets. The price of a full-sized sheep weighing about twenty-five pounds is about 4s. (Rs. 2).

#### Fowls.

Hens, reared chiefly by Maráthás, Musalmáns, and Christians, are of two breeds, large and small. Hens of the smaller breed cost 6d. to 1s. (4-8 as.) and hens of the large breed 4s. to 16s. (Rs. 2-8). Eggs of the smaller breed cost 3d. (2 as.) and of the large breed 6d. (4 as.) a dozen. Ducks, turkeys, and guineafowls are reared by Christians and Musalmáns. A duck costs 2s. to 4s. (Re. 1-Rs. 2), and a duck's egg  $\frac{3}{4}$ d. ( $\frac{1}{2}$  anna); a turkey costs 4s. to £1 (Rs. 2-10), and a turkey's egg  $1\frac{1}{2}$ d. (1 anna); a guineafowl costs 1s. to 4s. (8 as.-Rs. 2), and a guineafowl's egg  $\frac{3}{4}$ d. ( $\frac{1}{2}$  anna).

Especially in the west of the district cattle suffer much from epidemic disease. The worst time is at the opening of the south-west rains in the first fortnight in June, when they are reduced by bad and scanty fodder and are unable to stand the sudden change from heat to damp cold. One of the commonest and most fatal diseases is derangement of the liver. Other common complaints are foot-rot and inflammation of the lungs.

### Wild Animals.

Among *WILD ANIMALS*, of QUADREMANA, the BLACKFACED MONKEY, *kari mangia* or *vánar*, *Presbytis entellus*, is common all over the country, frequenting groves, river banks, and woodlands. The REDFACED MONKEY, *kempu mangia* or *mákad*, *Macacus radiatus*, is not nearly so common as the blackfaced variety, but is generally distributed.

Of CHEIROPTERA or Bats, the FLYING FOX, *gádal*, *Pteropus edwardsii*, is common all over the district wherever there are tamarinds, figs, or other trees with edible fruit. Its fat is used as a cure for rheumatism and its flesh is eaten by Musalmáns and Hindus as a medicine. *Cynopterus marginatus* is very common. *Hipposideros murinus* occurs, but is rather rare. *Nycticejus heathii* is common.

Of CARNIVORA or Flesh-eaters, the COMMON MUSK-SHREW, *chuchundi*, *Sorex corulescens*, frequents most buildings though it is not



numerous. The BLACK BEAR, *asval* or *kardi*, *Ursus labiatus*, is common on the Sahyádrí range and occurs also in the heavy forest on the Kánara border. Bears are much less numerous than they formerly were. Between 1840 and 1880 no less than 223 bears were killed. Of these 137 were killed between 1840 and 1850; fifty-one between 1850 and 1860; thirty-two between 1860 and 1870; and three between 1870 and 1880. The INDIAN-BADGER, *Mellivora indica*, is common in woodland and open country. It is said to dig up and eat dead bodies. The COMMON INDIAN OTTER, *niranái*, *Lutra nair*, is common on the banks of the larger streams. The TIGER, *K. huli*, *M. vágh*, *Felis tigris*, is not very common. It is confined to the Sahyádrí range and the strip of heavy forest in the extreme south. When the crops are on the ground tigers sometimes wander far from the forest and one was lately shot near Kitur. The people distinguish two kinds *dhánia* and *patáit*, but the only difference seems to be in size. Man-eating tigers, if they do occur, are rare, though man-eating panthers have been reported. Tiger's flesh is sometimes eaten by the depressed castes. In Belgaum during the thirty-seven years ending 1877, 372 tigers were killed. Arranging these thirty-seven years into three terms of nine years and one term of ten years the returns show a marked fall in the number slain, 128, 121, fifty-four, and sixty-nine, or a yearly average of fourteen, thirteen, six, and seven. The following statement shows the details of the five years ending 1882:

BELGAUM TIGERS, 1878-1882.

YEAR.	Tigers killed.	Rewards	Loss of Life.	
			Persons	Cattle.
1878 ... ..	3	£. s.	1	39
1879 ... ..	2	5 8	0	9
1880 ... ..	1	4 16	4	10
1881 ... ..	2	2 8	4	22
1882 ... ..	5	4 16	1	27

The LARGER PANTHER, *K. yemme kerkál*, *Felis pardus*, does not often occur east of the Poona-Dhárwár road, but is common all along the Sahyádris, in the Belgaum and Khánápur sub-divisions, and in the heavier forests of Khánápur bordering on Kánara. People have been wounded and killed by panthers, but there is no certain case on record in which a panther has attacked a man with the object of eating him. *Felis Panthera*, *K. kerkal*, the smaller darker and bolder panther, is found in all forest tracts. To the north of Belgaum and in the hilly parts of the Gokák and Chikodi sub-divisions they frequent the dense thickets of prickly-pear *Opuntia dilenii* in which they find a secure retreat. There is no way of driving or cutting them out of these thickets. The only plan to circumvent them is either to watch over their kills, or to picket out goats near to some thicket into which they are known to have gone, and then await their approach from a tree or rock. It is useless to sit down behind a bush or in a hole to await their coming. Panthers are much feared at Gokák, for they have hurt and killed many people. In Gokák their flesh is sometimes eaten by Mhárs and

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Mángs. Between 1840 and 1877, 830 panthers were killed. The rewards paid and the number of cattle killed are not mentioned. The details for the five years ending 1882 are :

BELGAUM PANTHERS, 1878-1882.

YEAR.	Killed..	Rewards.	Loss of Life.	
			Persons.	Cattle.
1878 ... ..	12	£. s.	9	80
1879 ... ..	11	12 12	6	71
1880 ... ..	10	10 10	2	31
1881 ... ..	16	11 8	13	22
1882 ... ..	16	16 10	3	52
		15 0		

The LEOPARD-CAT, *M. vágat*, is rare, occurring only on the Sahyádris and in the south Khánápur forests. Though scarcely bigger than a full-grown cat, the people say that it sometimes kills the largest buffaloes. It climbs trees, pounces on the back of its prey, and kills it by tearing its throat. The Common Jungle Cat, *K. arive bekku*, *M. rán mánjar*, *Felis chaus*, is common all over the district. Some years ago when antelope were common in the Belgaum plains, HUNTING LEOPARDS, *chita* or *chircha*, *Felis jubata*, were kept by the Mudhol chief. The STRIPED HYÆNA, *K. katta kiráb*, *M. taras*, *Hyæna striata*, is common all over the country. It is commonest in open hilly woodlands. Since 1840 seventy-nine hyænas have been killed. The CIVET CAT, *K. punagala bekku*, *M. kasturi mánjar*, *Viverrina malaccensis*, is common in the woodlands at Khánápur, Belgaum, and Gokák. The Common Tree or Toddy Cat, *K. matta bekku*, *M. hejjat*, *Paradoxurus musanga*, is common everywhere. The MADRAS MONGOOSE, *K. mungali*, *M. mungus*, *Herpestes griseus*, is common all over the district. *Herpestes smittii* occurs on the Sahyádris, and probably in the Gokák and Chikodi forests. *Herpestes monticolus* has been noticed in the Gokák forest land. *Herpestes vitticollis*, a much larger mongoose than *H. griseus* or *H. smittii*, occurs on the Sahyádris. The INDIAN WOLF, *K. tola*, *Canis pallipes*, is not uncommon in the open east but is seldom seen in the forest tracts. Since 1840 ten wolves have been killed. The COMMON INDIAN JACKAL, *K. kapalnari*, *M. kola*, *Canis aureus*, abounds everywhere. The JUNGLE DOG, *K. arive nai*, *M. jangali kutra*, *Cuon rutilans*, is very common in the southern forests but rare in the east. The INDIAN FOX, *K. chandak narí*, *Vulpes bengalensis*, is common in the open east, but is seldom seen in well-wooded tracts.

Of GLIRES or GNAWERS, the COMMON PORCUPINE, *M. salindar*, *Hystrix leucura*, is found in all forest tracts, especially on and near the Sahyádris. The BOMBAY RED SQUIRREL, *M. shekra*, *Sciurus indicus*, the *S. elphinstonii* of Jerdon, is common in the tall Sahyádris and south Khánápur forests, but does not occur further inland. The COMMON STRIPED SQUIRREL, *K. yenchí*, *Sciurus palmarum* abounds everywhere. The BROWN FLYING SQUIRREL, *Pteromys petaurista*, is rare and is confined to the south Khánápur forests. The JERBOA RAT, *Gerbillus indicus*, is common, and *Gerbillus speciosus* somewhat darker and about an inch smaller than *G. indicus*, is common in the thinly wooded parts of Khánápur. The MOLE RAT, *Nesokia indica*, is found

in the eastern sub-divisions. The BANDICOOT, *ghus*, *Mus bandicota*, is common in houses and granaries. The MIGRATORY RAT, *Mus decumanus*, is the common house-rat found everywhere. The LONG-TAILED TREE MOUSE, *Mus oleraceus*, is found in wooded parts of the district, living in trees. The COMMON INDIAN HOUSE MOUSE, *Mus urbanus*, from two to three inches long, may be seen in most houses, but is not very numerous. Animals of this genus are eaten by Vadars and other low-caste men. *Mus terricolor* is common in the more open parts of Khánápur. *Leggada lepida* is common in the thinly wooded parts of Khánápur. The BROWN SPINY MOUSE, *Leggada platythrix*, is found in Gokák. The FIELD RAT, *Golunda meltada*, is found in the open parts of the country, and is said to appear without any explainable cause, sometimes in great numbers, and to do much damage to crops as happened in the eastern sub-divisions in 1878, the year after the famine. The BLACKNAPED HARE, *K. mala*, *M. sasa*, *Lepus nigricollis*, is rare in the Sahyádris and does not frequent tall timber forests. It is common in the open country and in the scrub forests of Chikodi and Gokák.

Of MULTUNGULA, or animals whose hoof is divided into more than two parts, the WILD PIG, *K. handi*, *M. dukar*, *Sus indicus*, is common in all forest tracts and is eaten by Maráthás and by several of the early or depressed castes. It is a dirty feeder and will even eat carrion and cows which have died of disease, and in this way sometimes becomes infected with cattle-disease and falls a victim to its gluttony.

Of BISULCA or CUD-CHEWERS there are, the SÁMBHAR, *K. kadivi*, *M. sambar*, *Rusa aristotelis*, which is rare, occurring almost solely on the Sahyádris and in the Khánápur forests. One or two live in the scrub forest near Gokák, but east of Belgaum they are almost extinct. It never leaves the cover of the forests and keeps to the thickest parts. The SPOTTED DEER, *K. sárang*, *M. chital*, *Axis maculatus*, is common in the south Khánápur forests but rarely further north. In Gokák it has been almost exterminated by the villagers, who beat the forests regularly once a week and kill large quantities of game. It never leaves the forest tract, but unlike the *sámbhar* prefers low open bushland to tall timber. The BARKING DEER, *K. kondákuri*, *M. bekar*, *Cervulus aureus*, is not uncommon in most forests, especially on the Sahyádris and in south Khánápur. It never leaves the forest tract. The MOUSE DEER, *M. písái*, *Memimna indica*, is common in the Khánápur forests and is also met with on the Sahyádris. It does not occur east of Belgaum. The FOURHORNED ANTELOPE, *K. kondákuri*, *M. bekar*, *Tetraceros quadricornis*, has the same Kánarese and Maráthi name as the Barking Deer. Their general appearance is much the same and they frequent the same tracts. *T. quadricornis* is commonest in the open Sahyádris forests which it never leaves. The BLACK BUCK, *K. chiggari*, *M. haran*, *Antelope bezoartica*, was common thirty years ago in the fields about Belgaum. Now it is scarcely found west of Gokák, and even in the open east it is not numerous. It avoids woodlands, though it is sometimes found in low scrub on the borders of cultivated land. The INDIAN GAZELLE, *K. and M. madar*,

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*Gazella bennettii*; is not uncommon in the east. It frequents the low bushland east of Belgaum, but is not found further west.

The BISON, *M. gava*, *Gavæus gaurus*, is rare occurring only in one or two places on the Sahyádris and in the heavy forest in the extreme south. It is very shy. When in herds it seems never to attack the patches of *rági* and *sáva* which are grown in the centre of its haunts; but solitary bison do sometimes graze on the crops and cause much annoyance to the hillmen, who often find it difficult to drive them away. It is said that many years ago a large bull was shot by Mr., now Sir Frank Souter near One Tree Hill about a mile and a half to the north of Belgaum.

Of EDENTATA or Toothless Animals, the INDIAN ANT-EATER, *K. hanch bekku*, *M. khápar mánjar*, *Pholidotus indicus*, is fairly common in the forest tracts both east and west of Belgaum.

## Bees.

There are no tame bees. The wild bees are of six classes: *Narajjenu* (K.) or *Murkut* (M.) are small, scarcely the size of the small house-fly; the honey is pale yellow and is used in medicine. *Sunna nonajenu* (K.) or *Pove* (M.) is like the *Murkut* in many respects. Both *murkut* and *pove* make their nests round small twigs in bushes and also in the ground. *Nonajenu* (K.) or *Katyali* (M.) is of the size of an ordinary English bee. It builds its nests in trees and its honey is pale yellow and good. *Kondge* (M.), called variously in Kánarese *Kadujenu*, *Jagrijenu*, *Kuddujenu*, *Hebbajenu*, and *Sabarjenu*, is very large. Its honey is coarse and of a golden brown. It makes large combs stretching along large branches and also in rocks. *Sateru* (K.) or *Sátvani* (M.) is of the ordinary size. The honey is good though rather dark in colour. It makes a peculiar nest of seven layers of cells in trees. There is also a bee called *Atak*, but, except that the honey is thin and pale, nothing further is known about it. Besides from bees, honey is made from the *nána Lagerstræmia lanceolata*, mango, tamarind, *bábhul*, and *nim* *Melia azadirachta*, and from the blossoms of the *halli*, *tatta*, *bettavari*, and other creepers. The market price of honey varies from 3d. to 6d. (2-4 as.) the pound. There is no trade in honey.

## Birds.

Among BIRDS, of RAPTORES, *OTOGYPS CALVUS* (Scop.), the Black Vulture, is common everywhere and most numerous in forest tracts, especially on the Sahyádris and in Khánápur. It is a resident. *PSEUDOGYPS BENGALENSIS* (Gmel.), the Whitebacked Vulture, is a resident and common everywhere. *NEOPHRON GINGINIANUS* (Lath.), the Common Scavenger Vulture, is a resident and common near all large villages, especially towards the east. *FALCO SUBBUTEO* (L.), the European Hobby, has been once procured by Captain Butler. It is a cold-weather visitant and occurs only as a straggler. *CHIQUERA FALCO* (Daud.), the Redheaded Merlin, a cold-weather visitant, is rare, occurring only in the open country. *CERCHNEIS TINNUNCULUS* (L.), the Kestrel, is a very common cold-weather visitant. *CERCHNEIS NAUMAUNII* (Fleisch.), the Lesser Kestrel, is very rare occurring if at all only as a straggler in the cold season. *CERCHNEIS AMURENSIS* (Radde.), the Orangelegged Kestrel, is very rare occurring only as a cold-weather straggler. *ASTUR BADIUS* (Gm.), the Indian

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Sparrow Hawk, is very common; it probably leaves before the beginning of the rains. *ACCIPITER NISUS* (L.), the European Sparrow Hawk, is very rare, occurring only as a cold-weather straggler. *ACCIPITER VIRGATUS*, the Besra Sparrow Hawk, occurring in the Khánápur forests, is rare and probably leaves during the rains. *AQUILA MOGILNIK* (S. G. Gm.), the Imperial Eagle, is very rare, found only in the open country east of Belgaum. *AQUILA VINDHIANA* (Frankl.), the Tawny Eagle, is very common, especially in thinly wooded parts. It probably leaves at the beginning of the rains. *HIERAËTUS PENNATUS* (Gm.), the Dwarf Eagle, is rare. It is obtained, recorded by Captain Butler, from Belgaum in the cold season. *NISAËTUS FASCIATUS* (Vieill.), Bonelli's Eagle, is rather rare, but occurs in open forest and in open country near forests. *CIRCAËTUS GALLICUS* (Gm.) is rare, but is a resident. *SPILORNIS MELANOTIS* (Jerd.), the Crested Serpent-Eagle, is a resident, very common on the Sahyádris where only it seems to be found. *BUTASTUR TEESA* (Frankl.), the White-eyed Buzzard, is very common particularly in the Khánápur and Sahyádris forests. It probably leaves at the beginning of the rains. *CIRCUS MACRURUS* (S. G. Gm.), the Pale Harrier, a cold-weather visitant, is common in the open parts. *CIRCUS CINERACEUS* (Mont.) is common in open parts. *CIRCUS ÆRUGINOSUS* (Lin.), the Marsh Harrier, a cold-weather visitant, is very common near ponds and rice-fields in Khánápur but less common further north. *HALIASTUR INDUS* (Bodd.), the Maroon-backed Kite, a resident, is found near almost all large ponds and reservoirs. *MILVUS COVINDA* (Sykes), the Common Kite, is a resident, very common in the fair weather and less common during the rains. *PERNIS PTILORHYNCHUS* (Tem.), the Crested Honey Buzzard, is very common in all eastern forest tracts and open country. It probably leaves during the rains. *ELANUS CÆRULEUS* (Deel.), the Blackwinged Kite, is very common everywhere, particularly in the forests of Khánápur and on the Sahyádris. It probably leaves during the rains.

*STRIX JAVANICA* (Gm.), the Indian Screech Owl, a resident, is common in the thinly wooded east, but does not occur on the Sahyádris or in other well-timbered parts. *SYRNIUM INDRANEE* (Sykes), the Brown Wood Owl, is rare, probably confined to the Sahyádris. *SYRNIUM OCELLATUM* (Less.), the Mottled Wood Owl, is common in thinly-wooded tracts, especially in Khánápur. *ASIO ACCIPITRINUS* (Pall.), the Shorteared Owl, is rare, occurring only in the cold season in open grass land. *BUBO BENGALENSIS* (Frankl.), the Rockhorned Owl, is a resident occurring in open tracts and in certain thinly wooded parts of the Sahyádris. *KETUPA CEYLONENSIS* (Gm.), the Brown Fish Owl, is common in the south and west forests, and sometimes occurs in open tracts. *SCOPS PENNATUS* (Hodgs.), the Indian Scops Owl, a resident, is often heard but seldom seen, and is probably confined to the Sahyádris and their immediate neighbourhood. *CARINE BRAMA* (Tem.), the *pingala*, is very common in open and thinly wooded parts, but does not occur in thick woods or on the Sahyádris.

*GLAUCIDIUM MALABARICUM* (Bly.), the Malabár Owlet, is a resident;

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common in the Khánápur timber forests, less common on the Sahyádris, and not found outside of the belt of heavy rainfall. *NINOX LUGUBRIS* (Tick.), rare but probably a resident, occurs in the Khánápur forests.

Of *INSESSORES*, *HIRUNDO RUSTICA* (Lin.), the Common Swallow, is a cold-weather visitant found everywhere. *HIRUNDO FILIFERA* (Steph.), the Wiretailed Swallow, a resident, is common everywhere in open country and thin bushlands. *HIRUNDO ERYTHROPGIA* (Sykes), the Redrumped Swallow, is a resident and common everywhere. *PTYNOPROGNE CONCOLOR* (Sykes), the Dusky Crag Martin, a resident, is common in most parts, especially on the Sahyádris.

*CYPSELLUS AFFINIS* (J. E. Gr.), the Indian Swift, a resident, is common in most parts, but does not occur everywhere or in the forests. *DENDROCHELIDON CORONATA* (Tick.), the Crested Swift, is very common in all forest tracts west of Belgaum, but does not occur in the open country.

*CAPRIMULGUS INDICUS* (Lath.), the Jungle Nightjar, a resident, is common in Khánápur in the open as well as in the forests. *CAPRIMULGUS ATRIPENNIS* (Jerd.), the Ghát Nightjar, a rather rare bird, occurs on the Sahyádris and in the Khánápur forests. *CAPRIMULGUS ASIATICUS* (Lath.), the Common Indian Nightjar, a resident, occurs in the eastern bushlands. *CAPRIMULGUS MAHRATTENSIS* (Sykes), occurs, but is rare. *CAPRIMULGUS MONTICOLUS* (Frankl.), Franklin's Nightjar, a resident, is common in all forest tracts. *HARPACTES FASCIATUS* (Forst.), the Malabár Trogon, a resident, is found, but rarely in the heavy south Khánápur forest; it occurs nowhere except in the outlying bit of Belgaum forest at the foot of the Rám pass. *MEROPS VIRIDIS* (Lin.), the Common Indian Bee-eater, a resident, occurs everywhere except in heavy forest. *MEROPS SWINHOII* (Hume), the Chestnutheaded Bee-eater, occurs occasionally on and at the foot of the Sahyádris range. *NYCTIORNIS ATRERTONI* (Jard. and Selb.), the Bluenecked Bee-eater, is rather rare on the Sahyádris and in south Khánápur and does not occur anywhere else. *CORACIAS INDICA* (L.), the Indian Roller, a cold-weather visitant, is common all over the district.

*PELAGOPSIS GURIAL* (Pearson), the Brownheaded Kingfisher, a resident, occurs only on the Tillarnádi at the foot of the Rám pass, where it is common. *HALCYON SMYRNENSIS* (Lin.), the Whitebreasted Kingfisher, a resident, is common everywhere. *ALCEDO BENGALENSIS* (Gmel.), the Common Kingfisher, a resident, is common everywhere in suitable places. *ALCEDO BEAVANI* (Wald.), Beavan's Kingfisher, probably a resident, is said to have been shot in the Rám pass. *CERYLE RUDIS* (Lin.), the Pied Kingfisher, a resident, is common near all the larger streams and ponds.

*DICHOCEROS CAVATUS* (Shaw), the Great Hornbill, a resident, is common on the Sahyádris and in the lofty forests of Khánápur. Stragglers are sometimes found in the open east. *HYDROCISSA CORONATA* (Bodd.), a resident, is very common in all forest tracts. *TOCKUS GRISEUS* (Lath.), the Grey Jungle Hornbill, a resident, is common in the lofty forests of Khánápur and on the Sahyádris.



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*PALEORNIS TORQUATUS* (Bodd.), the Roseringed Paroquet, a resident, is common everywhere. *PALEORNIS PURPUREUS* (P. 4. S. Müll.), the Roseheaded Paroquet, a resident, is common in the cold and hot weather in the Khánápur and Sahyádris forests, and during the rains in the east. *PALEORNIS COLUMBOIDES* (Vig.), the Bluewinged Paroquet, a resident, is common on the crest of the Sahyádris, but occurs nowhere else. *LORICULUS VERNALIS* (Sparrm.), the Indian Loriquet, a resident, is found during the cold and hot weather only on the crest of the Sahyádris. During the rains it is common also in the east. *PICUS MAHARATENSIS* (Lath.), the Yellowfronted Woodpecker, a resident, is very common in all woody parts of the country. *YUNGIPICUS NANUS* (Vig.), the Southern Pigmy Woodpecker, is not uncommon in the heavy Khánápur forests. It has not been found elsewhere, but probably occurs on the Sahyádris. *YUNGIPICUS GYMNOTHALMUS* (Blyth.), is rare, occurring in the heavy south Khánápur forests. *HEMICERCUS CORDATUS* (Jerd.), the Heartspotted Woodpecker, a resident, is common in the Khánápur and Sahyádris forests. *CHRYSOCOLAPTES DELESSERTII* (Malh.), the Southern Large Golden-backed Woodpecker, a resident, is very common in the Khánápur and Sahyádris forests.

*CHRYSOCOLAPTES FESTIVUS* (Bodd.), the Blackbacked Woodpecker, is rare, occurring in the south of Khánápur and probably on the Sahyádris. *THRIPONAX HODGSONI* (Jerd.), the Large Black Woodpecker, a resident, is not uncommon in the heavy south Khánápur forest. *GECCINUS STRIOLATUS* (Blyth.), the Small Green Woodpecker, is rare, occurring in the Khánápur forests and probably on the Sahyádris. *CHRYSOPHLEGMA CHLORIGASTER* (Jerd.), the Southern Yellownaped Woodpecker, a rather rare resident, occurs in the Khánápur forests and on the Sahyádris. *MICROPTERNUS GULARIS* (Jerd.), the Madras Rufous Woodpecker, a resident, is common on the Sahyádris and in the low Khánápur forests. *BRACHYPTERNUS PUNCTICOLLIS* (Malh.), the Lesser Goldenbacked Woodpecker, a resident, is very common on the Sahyádris and in the southern Khánápur forests. *YUNX TORQUILLA* (L.), the Wry Neck, is a rather rare cold-weather visitant in the open east. It does not occur west of Belgaum. *MEGALÆMA INORNATA* (Wald.), the Western Green Barbet, a resident, is common in the Khánápur and Sahyádris forests. *MEGALÆMA VIRIDIS* (Bodd.), the Small Green Barbet, a resident, is common in woodlands and tree-clumps throughout the district. *XANTHOLÆMA HEMACEPHALA* (Müll.), the Crimsonbreasted Barbet, a resident, is common everywhere. *XANTHOLÆMA MALABARICA* (Blyth.), the Crimsonthroated Barbet, a rare resident, occurs in the Khánápur forests and at the foot of the Rám pass.

*CUCULUS SONNERATI* (Lath.), the Banded Bay Cuckoo, is not uncommon on and near the Sahyádris during the rainy season. It does not seem to remain during the rest of the year. *CUCULUS MISROPTERUS* (Gould.), the Indian Cuckoo, occurs on and near the Sahyádris during the rainy season. It is rare, and leaves when the rains are over. *HIEROCOCCYX VARIUS* (Vahl.), the Common Hawk Cuckoo, a resident, is common everywhere west of Belgaum, except in dense forest. *CACOMANTIS PASSERINUS* (Vahl.), the Plaintive Cuckoo, a resident, is common in all forest tracts except in the

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lofty forests of the south. *COCCYSTES JACOBINUS* (Bodd.), the Pied Crested Cuckoo, a resident, is common in all scrub forests east of Belgaum and in north Khánápur. It occurs also in the open country during the hot and cold seasons.

*EUDYNAMYS HONORATA* (Lin.), the Koel, a resident, is common in the north and east, but is rare in Khánápur. *RHODYTES VIRIDIROSTRIS* (Jerd.), the Small Greenbilled Cuckoo, a resident, is common in the scrub forests of the east and of Khánápur, but seems not to occur on the Sahyádris. *CENTROCOCCYX RUFIPENNIS* (Illg.), the Common Crow Pheasant, a resident, is common in open scrub forest and gardens all over the district. It does not frequent tall timber forests. *TACCOCUA LESCHENAUITI* (Less.), the Southern Sirkeer, is probably a resident, but is rare, occurring only in the scrub forests east of Belgaum. *ARACHNOTHERA LONGIROSTEA* (Lath.), the Little Spider Hunter, a resident, is not uncommon in the Khánápur forests. It occurs also at the foot of the Rám pass.

*ÆTHOPHYGA VIGORSI* (Sykes), the Violet-eared Red Honeysucker, a resident, is common on the Sahyádris and in the Khánápur forests. *CINNYRIS ZEYLONICA* (Lin.), the Amethyst-rumped Honeysucker, is a common resident. *CINNYRIS MINIMA* (Sykes), the Tiny Honeysucker, a resident, is common on the Sahyádris and in the Khánápur forests, but does not occur in the eastern bushlands. *CINNYRIS ASIATICA* (Lath.), the Purple Honeysucker, probably a resident, is not uncommon on the Sahyádris and in Khánápur. *DICEUM ERYTHRO-RHYNCHUS* (Lath.), Tickell's Flowerpecker, a resident, is common in Khánápur and Belgaum. *DICEUM CONCOLOR* (Jerd.), the Thickbilled Flowerpecker, is a resident of all forests and open forest fringes. *DENDROPHILA FRONTALIS* (Horsf.), the Velvet-fronted Blue Nuthatch, a resident, is very common in the thick forests of the south and near Belgaum.

*UPUPA EPOPS* (Lin.), the European Hoopoe, a cold-weather visitant, is common everywhere. *UPUPA CEYLONENSIS* (Reich.), the Indian Hoopoe, a resident, is found all over the district. It is commonest in thinly-wooded parts during the fair season.

*LANIUS LAHTORA* (Sykes), the Indian Grey Shrike, a resident, is common in the open country to the north and east, but is not found west of Belgaum. *LANIUS ERYTHRONOTUS* (Vig.), the Rufousbacked Shrike, a resident, is very common everywhere west of the Poona road except in dense forests. Towards the east it is replaced by *Lahtora*, the representative species of the open country. *LANIUS VITTATUS* (Valenc.), the Baybacked Shrike, a resident, is common in the low bushlands east of the Poona road, where it almost entirely replaces *L. erythronotus*. *LANIUS CRISTATUS* (L.), the Brown Shrike, a cold-weather visitant, is common throughout the district especially in Khánápur. *TEPHRODORNIS SYLVICOLA* (Jerd.), the Malabár Wood Shrike, a resident, is common in the big forests of Khánápur, but appears not to occur elsewhere. *TEPHRODORNIS PONDICERIANUS* (Gm.), the Common Wood Shrike, a resident, is common in all forest tracts. *HEMIPUS PICATUS* (Sykes), the Little Pied Shrike, probably a resident, is not uncommon in the tall forests of Belgaum and Khánápur; it does not occur further east. *VOLVOCIVORA SYKESI* (Strickl.), the Black-

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headed Cuckoo Shrike, probably a resident, is very common in all woodlands. *GRAUCALUS MACII* (Less.), the Large Cuckoo Shrike, a resident, is common in the Khánápur forests and, generally, in moderate-sized thick forests. It does not occur east of Belgaum. *PERICROCOTUS FLAMMEUS* (Forst.), the Orange Minivet, a resident, is common in the Khánápur and Belgaum forests. *PERICROCOTUS PERIGRINUS* (Lin.), the Small Minivet, a resident, is very common everywhere. *PERICROCOTUS ERYTHROPYGIUS* (Jerd.), a resident, is occasionally found in the Ghatprabha forests near Sutgatti, but nowhere else. *BUCHANGA ATRIA* (Herm.), the Common Drongo Shrike, a resident, is common everywhere except in the Khánápur forests where it is replaced by *BUCHANGA LONGICAUDATA* (Hay.), the Longtailed Drongo, a resident, common in the Khánápur forests and on the Sahyádris and passing to the eastern districts during the rains and cold weather. *BUCHANGA CÆRULESCENS* (Lin.), the Whitebellied Drongo, a resident, is common on the Sahyádris and in the Khánápur forests, but does not occur further east. *CHAPTIA CENEA* (Vieill.), the Bronzewinged Drongo, a resident, is rather common in the tall forests of Khánápur and extends to the Sahyádris within Belgaum limits. *DISSEMURUS PARADISEUS* (Lin.), the Malabár Racket-tailed Drongo, a resident, is common in the tall Khánápur forests but does not occur elsewhere. *MUSCIPETA PARADISI* (Lin.), the Paradise Flycatcher, a resident, is common in all woodlands, especially in the dense Khánápur forests. *HYPOTHYMIS AZUREA* (Bodd.), the Black-naped Blue Flycatcher, a resident, is not uncommon in the low thick Khánápur woodlands and occurs also on the Sahyádris. *LEUCOCERCA AUREOLA* (Vieill.), the Whitebrowed Fantail, a resident, is common in all forest tracts except those on the crest of the Sahyádris. *LEUCOCERCA LEUCOGASTER* (Cuv.), the Whitespotted Fantail, a resident, is common everywhere. *CULICICAPA CEYLONENSIS* (Swans.), the Gray-headed Flycatcher, a cold-weather visitant, is found in the scrub forest near Gokák. *ALSEONAX LATIROSTRIS* (Raffl.), the Southern Brown Flycatcher, a cold-weather visitant, is not uncommon in the scrub forest east of Belgaum. *ALSEONAX TERRICOLOR* (Hodgs.), found at Belgaum, is rare. *STOPOROLA MELANOPS* (Vig.), the Verditer Flycatcher, probably a resident, is common in the Khánápur and Belgaum forests. *CYORNIS RUBECULOIDES* (Vig.), the Bluethroated Redbreast, is a rare cold-weather straggler. Only two specimens have been procured. *CYORNIS TICKELLI* (Blyth.), Tickell's Blue Redbreast, a resident, is common in all forest tracts. *CYORNIS RUFICAUDUS* (Sws.) may occur as a straggler. In October 1880 a female bird was found in the scrub forest of Belgaum which seemed to belong to this species. *CYORNIS PALLIPES* (Jerd.), the Whitebellied Blue Flycatcher, probably a resident, has been found only on the Sahyádris hills and rarely even there. *ERYTHROSTERNA PARVA* (Bechst.), the Whitetailed Robin Flycatcher, a cold-weather visitant, is common everywhere.

*MYIOPHONEUS HORSFIELDI* (Vig.), the Malabár Whistling Thrush, a resident, is common in dense thickets and ravines on the Sahyádris where only it is found. *PITTA BRACHYURA* (Lin.), the Indian Ground Thrush, is found only during the period of migration, on the Sahyádris and at Belgaum in May and June. *CYANOCINCLUS CYANUS* (Lin.), the Blue Rock Thrush, a cold-weather visitant, is common in all the more

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open parts of the country including the Sahyádris. *PETROPHILA CINCLORHYNCHA* (Vig.), the Blueheaded Chat Thrush, a resident, is very common in the Khánápur and Belgaum forests. *GEOCICHLA CYANOTIS* (Jerd. and Selb.), the Whitewinged Ground Thrush, a resident, is common on the Sahyádris and in the Khánápur forests. *GEOCICHLA UNICOLOR* (Tick.), the Dusky Ground Thrush, is rare. One specimen was procured by Captain Butler at Belgaum in April. *MERULA NIGROPILEA* (Lafr.), the Blackcapped Blackbird, a resident, is common on the Sahyádris, but is not found east of Belgaum. *PYCTORIS SINENSIS* (Gm.), the Yelloweyed Babbler, a resident, is common throughout the district. *ALCIPPE POLOCEPHALA* (Jerd.), the Nilgiri Quaker Thrush, a resident, is common in the Khánápur and Belgaum forests. *ALCIPPE ATRICEPS* (Jerd.), the Blackheaded Wren Warbler, is common in the west of Khánápur, but is not found elsewhere. *DUMETIA ALBOGULARIS* (Bly.), the Whitethroated Wren Babbler, a resident, is common in all forest tracts. *PELLORNEUM RUFICEPS* (Swains.), the Spotted Wren Warbler, a resident, is found only in the Khánápur forests where it is common. *POMATORHINUS HORSFIELDI* (Sykes), the Southern Scimitar Babbler, a resident, is common on the Sahyádris and rarer in the southern Khánápur forests.

*MALACOCERCUS GRISEUS* (Lath.), the Whiteheaded Babbler, a resident is common in the bushlands of Gokák and Chikodi, but disappears, towards the east. *MALACOCERCUS SOMERVILLII* (Sykes), the Rufous-tailed Babbler, a resident, is common in the Khánápur forests and on the Sahyádris. *ARGYA MALCOLMI* (Sykes), the Large Grey Babbler, a resident, is common in the forests north of the Ghatprabha river and in the open country towards the east; it does not occur further south. *LAYARDIA SUBRUFUS* (Jerd.), the Rufous Babbler, a resident, is found nowhere except in the forests about Hemadgi and Mendil in south-west Khánápur, and even there it is rare. *CHATARRHEA CAUDATA* (Dum.), the Striated Bush Babbler, is rare, occurring only in the open country about Belgaum. *SCHENICOLA PLATYURUS* (Jerd.), the Broadtailed Reed Warbler, is rare, occurring about Belgaum in the rains and hot weather, and breeding there.

*HYPSPETES GANEESA* (Sykes), the Black Ghát Bulbul, a resident, is very common on the Sahyádris but is found nowhere else. *CRINIGER ICTERICUS* (Strickl.), the Yellowbrowed Bulbul, a resident, is common in the Khánápur forests and on the Sahyádris. *IXOS LUTEOLUS* (Less.), the Whitebrowed Bulbul, a resident, is common in the low thick forests on the borders of the Sahyádris. *RUBIGULA GULARIS* (Gould.), the Rubythroated Bulbul, a resident, is common at the foot of the Rám pass, but has not been observed elsewhere. *BRACHYODIUS POLIOCEPHALUS* (Jerd.), the Grayheaded Bulbul, a resident, is not uncommon in the south-west corner of the Khánápur sub-division, but is found nowhere else. *OTOCOMPSA FUSCAUDATA* (Gould.), the Southern Redwhiskered Bulbul, a resident, is common in all forests west of Suldhá, particularly in Khánápur and on the Sahyádris. *MOLPASTES HEMORRHOUS* (Gm.), the Common Madras Bulbul, a resident, is very common all over the district. *PHYLLORNIS JERDONI* (Blyth.), the Common Green Bulbul, a resident, is common in Khánápur except in the tall timber forests. It is also common along the Sahyádris. *PHYLLORNIS MALABARICUS* (Gm.), the Malabár Green Bulbul, is a resident,

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frequenting the same parts of the district as the last. *IORA TIPHIA* (Lin.), the Blackheaded Green Bulbul, a resident, is common throughout the district. *IRENA PUELLA* (Lath.), the Fairy Blue Bird, a resident, is not uncommon at the foot of the Rám pass; it is also found in the extreme south of Khánápúr in tall timber forest but, as a rule, does not occur above the Sahyádris. *ORIOLOUS KUNDUO* (Sykes), the Indian Oriole, probably a resident, is common in the open country and in low bushland but is seldom seen in the Sahyádris. *ORIOLOUS MELANOCEPHALUS* (Lin.), the Blackheaded Oriole, a resident, is common in the Khánápúr forests and on the Sahyádris. *COPSYCHUS SAULARIS* (Lin.), a resident, is common in all forests and passes to the open country. *CERCOTRICHAS MACRURA* (Gm.), the Shama, a resident, frequents thick forests; it is common on the Sahyádris, but is seldom found east of Belgaum.

*THAMNOBIA FULICATA* (Lin.), the Indian Black Robin, a resident, is common all over the district. *PRATINCOLA CAPRATUS* (Lin.), the White-winged Bushchat, is common everywhere. *PRATINCOLA INDICUS* (Bly.), the Indian Bushchat, a cold-weather visitant, is common in open and thinly wooded tracts. *RUTICILLA RUFIVENTRIS* (Vieill.), the Indian Redstart, a cold-weather visitant, is common throughout the district, except in thick forest. *LAEVIVORA SUPERCILIARIS* (Jerd.), the Blue Woodchat, a rather common resident, is confined to the Sahyádris. *CYANECULA SUECICA* (Lin.), the Redspotted Bluethroat, a cold-weather visitant, is common all over the district except on the Sahyádris and in thick forest. *ACROCEPHALUS STENTORIUS* (Hemp. and Ehr.), the Large Reed Warbler, a cold-weather visitant, occurs occasionally in the more open country but is not found in the forest tracts. *ACROCEPHALUS DUMETORUM* (Bly.), the Lesser Reed Warbler, a cold-weather visitant, is common in the more open country. *ACROCEPHALUS AGRICOLUS* (Jerd.), the Paddyfield Warbler, a cold-weather visitant, has been found by Captain Butler at Belgaum. *LOCUSTELLA HENDERSONI* (Cass.), Henderson's Locustelle, probably only a visitant, is not uncommon about Belgaum during the rains, frequenting rice-fields and high grass. *ORTHOTOMUS SUTORIUS* (Penn.), the Indian Tailor Bird, a resident, is common in the open country, generally near wells, ponds, or streams; it does not occur in forests. *PRINIA SOCIALIS* (Sykes), the Ashy Wren Warbler, a resident, is common in the open country, but is seldom found in thick forest. *PRINIA ADAMSI* (Jerd.), one specimen has been obtained which appears to belong to this 'lost' species. *PRINIA GRACILIS* (Frankl.), Franklin's Wren Warbler, a resident, appears to be not uncommon in the opener forest land near the Sahyádris. *PRINIA HODGSONI* (Bly.), the Malabár Wren Warbler, a resident, is not uncommon in the opener forests near the Sahyádris. *CISTICOLA CURSITANS* (Frankl.), the Rufous Grass Warbler, is common in grass-lands in the open country. *DRYMCECA INORNATA* (Sykes), the Earthbrown Wren Warbler, a resident, is common in the open country. *HYPOLAIS RAMA* (Sykes), the Tree Warbler, is a cold-weather visitant. *HYPOLAIS CALIGATA* (Sicht. Sykes), the Allied Tree Warbler, a cold-weather visitant, is found in the eastern scrub forest. *PHYLLOSCOPUS TRISTIS* (Blyth.), the Brown Warbler, is found at Belgaum. *PHYLLOSCOPUS MAGNIROSTRIS* (Blyth.), the Largebilled Tree Warbler,



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recorded from Belgaum by Captain Butler, appears to be rare. *PHYLLOSCOPUS NITIDUS* (Blyth.), the Bright-green Tree Warbler, recorded from Belgaum, by Captain Butler, appears to be rare. *PHYLLOSCOPUS INDICUS* (Jerd.), the Olivaceous Tree Warbler, a cold-weather visitant, is found in the east. *REGULOIDES OCCIPITALIS* (Jerd.), the Large-crowned Tree Warbler, a cold-weather visitant, seems to be rare. *REGULOIDES HUMII* (Brooks), Hume's Crowned Tree Warbler, found by Captain Butler at Belgaum, appears to be rare. *SYLVIA JERDONI* (Blyth.), the Blackcapped Warbler, a cold-weather visitant, is not uncommon in the east. *SYLVIA AFFINIS* (Blyth.), the Allied Grey Warbler, a rare cold-weather visitant, has been found by Captain Butler at Belgaum. *MOTACILLA MADERASPATENSIS* (Gm.), the Large Pied Wagtail, is common throughout the district. *MOTACILLA PERSONATA* (Gould.), the Blackfaced Wagtail, is recorded from Belgaum by Captain Butler. *MOTACILLA DUKHUNENSIS* (Sykes), the Whitefaced Wagtail, a cold-weather visitant, is common everywhere. *CALOBATES MELANOPE* (Pall.), the Gray and Yellow Wagtail, is a common cold-weather visitant. *BUDYTES CINEREOCAPILLA* (Savi.), the Slatyheaded Wagtail, a cold-weather visitant, is common everywhere.

*BUDYTES MELANOCEPHALA* (Licht.), the Blackcapped Field Wagtail, a cold-weather visitant, has been found by Captain Butler at Belgaum, where it seems to be common. *BUDYTES FLAVA* (L.), the Grayheaded Yellow Wagtail, has been recorded from Belgaum by Captain Butler. *LIMONIDROMUS INDICUS* (Gm.), the Wood Wagtail, probably a resident, is common in the tall forests in Khánápur but seldom occurs east of Belgaum. *ANTHUS TRIVIALIS* (Lin.), the European Tree Pipit, a cold-weather visitant, is common in the open country. *ANTHUS MACULATUS* (Hodgs.), is common in open wooded tracts. *CORYDALLA RUFULA* (Vieill.), the Indian Titlark, a resident, is common. *ZOSTEROPS PALPEBROSA* (Yem.), the White-eyed Tit, a resident, is common in all forest tracts west of Suldhál. *PARUS NIPALENSIS* (Hodgs.), the Indian Gray Tit, a resident, is common in the Belgaum and Khánápur forests. *MACHLOPHEUS APLONOTUS*, (Blyth.), the Southern Yellow Tit, a resident, is common in the Belgaum and Khánápur forests.

*CORVUS MACRORHYNCHUS* (Wagl.), the Carrion Crow, a resident, is common everywhere. *CORVUS SPLENDENS* (Vieill.), the Common Graynecked Crow, a resident, is common everywhere, except on the crest of the Sahyádris and in the heavy Khánápur forest. *DENDROCITTA RUFA* (Scop.), the Common Magpie, a resident, is common in all forests.

*ACRIDOTHERES TRISTIS* (Lin.), the Common Myna, a resident, is common in the open country. *ACRIDOTHERES FUSCUS* (Wagl.), the Dusky Myna, a resident, is common in the better-wooded parts of the country. *STURNIA PAGODARUM* (Gm.), the Blackheaded Myna, a resident, is common in Belgaum and Khánápur, and also occurs in the open country. *STURNIA MALABARICA* (Gm.), the Grayheaded Tree Myna, a resident, is fairly common in Khánápur and Belgaum. *STURNIA BLYTHI* (Jerd.), the Whitebreasted Tree Myna, a resident, is fairly common in the Khánápur forests in the cold and hot weather,



and in the open country during the rains. *PASTOR ROSEUS* (Lin.), the Rosecoloured Starling, a cold-weather visitant, is common everywhere except in thick forests. *PLOCEUS PHILIPPINUS* (Lin.), the common Weaver Bird, a resident, is common everywhere except in forests. *PLOCEUS MANYAR* (Horsf.), the Striated Weaver Bird, a resident, is fairly common in the open country.

*AMADINA MALACCA* (Lin.), the Blackheaded Munia, a resident, is common in the open country. *AMADINA PUNCTULATA* (Lin.), the Spotted Munia, is fairly common in the forests east of Belgaum, and less common in Khánápur. *AMADINA PECTORALIS* (Jerd.), the Rufousbellied Munia, is very rare, found only at Hemádge in the south-west corner of Khánápur. *AMADINA STRIATA* (Lin.), the Whitebacked Munia, common in the Khánápur and Belgaum forests, is not confined to the Sahyádris. *AMADINA MALABARICA* (Lin.), the Plain Brown Munia, is common in the open country and in the Khánápur forests. *ESTRELA AMANDAVA* (Lin.), the Red Waxbill, a resident, is common in the tracts east of Belgaum, being specially fond of sugarcane fields. *PASSER DOMESTICUS* (Linn.), the Common Sparrow, a resident, is common everywhere in towns and large villages. *GYMNORIS FLAVICOLLIS* (Frankl.), the Yellowthroated Sparrow, a resident, is common in all forests passing into the more open country. *EMBERIZA BUCHANANI* (Blyth.), the Graynecked Bunting, found by Captain Butler at Belgaum, seems to be rare. *EUSPIZA MELANOCEPHALA* (Scop.), the Blackheaded Bunting, a cold-weather visitant, is common on tilled lands. *EUSPIZA LUTEOLA* (Sparrm.), the Redheaded Bunting, a cold-weather visitant, is not uncommon in the open country. *CARPODACUS ERYTHRINUS* (Pall.), the Common Rosefinch, a resident, is common in the open woodlands of Khánápur and Belgaum and in the forest tract in the east.

*MIRAFRA AFFINIS* (Jerd.), the Madras Bushlark, a resident, is common in the eastern scrub forests, but is found nowhere else. *MIRAFRA ERYTHROPTERA* (Jerd.), the Redwinged Bushlark, a resident, is common in the eastern scrub forests. *AMMOMANES PHENICURA*, (Frankl.), the Rufoustailed Finchlark, a resident, is common in the open country east of Belgaum. *PYRRHULAUDA GRISEA* (Scop.), the Blackbellied Finchlark, a resident, is common in the open country west of Belgaum. *CALANDRELLA BRACHYDACTYLA* (Leisl.), the Social Lark, a cold-weather visitant, is common in fields in the open country. *SPIZALAUDA DEVA* (Sykes), the Small Crown-crested Lark, a resident, is common in the open country, but does not occur on the Sahyádris. *SPIZALAUDA MALABARICA* (Scop.), the Large Crown-crested Lark, a resident, is very common in Belgaum and Khánápur. *ALAUDA GULGULA* (Frankl.), the Skylark, a resident, is not found on the Sahyádris but is not uncommon in the open east.

Of *GEMITORES*, *CROCOPUS CHLORIGASTER* (Blyth.), the Southern Green Pigeon, is common in the cold and hot weather; it seems to leave the district during the rains. *OSMOTRERON MALABARICA* (Jerd.), the Grayfronted Green Pigeon, probably a resident, is not uncommon in the south Khánápur forests, where only it seems to be found. *PALUMBUS ELPHINSTONII* (Sykes), the Nilgiri Wood Pigeon, is not uncommon on the crest of the Sahyádris to which it is

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confined. *COLUMBA INTERMEDIA* (Strickl.), the Indian Blue-rock, a resident, is common in the open country and on the crest of the Sahyádris. *TURTUR PULCHRATUS* (Hodgs.), the Indian Turtle Dove, a cold-weather visitant, is common in the low forests of Khánápur and Belgaum. *TURTUR MEENA* (Sykes), the Rufous Turtle Dove, a cold-weather visitant, is common in the low forests of Khánápur and Belgaum. *TURTUR SENEGALENSIS* (Linn.), the Little Brown Dove, a resident, is very common everywhere except in tall forests. *TURTUR SURATENSIS* (Gm.) the Spotted Dove, a resident, is common in all forest tracts. *TURTUR RISORUS* (Linn.), the Common Ring Dove, a resident, is very common east of Belgaum both in woodlands and in the open country. *TURTUR TRANQUEBARICUS* (Herm.), the Vinous Ring Dove, is very rare; only one specimen in the open country at Lingánmáth has been recorded. *CHALCOPHAPS INDICA* (Lin.) is rather rare. It has been found in the Khánápur and south Belgaum forests and is probably a resident.

Of *RASORES*, *PTEROCLES FASCIATUS* (Scop.) (A),<sup>1</sup> the Painted Sandgrouse, a resident, is very common in and is confined to the scrub forests of East Belgaum. *PTEROCLES EXUSTUS* (Temm.) (A), the Common Sandgrouse, a resident, is very common in the open east, as a rule frequenting open grass lands. *PAVO CRISTATUS* (Lin.) (A), the Peacock, a resident, is very common in the scrub forests of Gokák and Chikodi, but is comparatively rare in the Sahyádris and in the Khánápur forests. *GALLUS SONERATI* (Tem.) (A), the Gray Jungle-fowl, a resident, is common in Khánápur and on the Sahyádris, and is less common in the eastern scrub forest. *GALLOPERDIX SPADICEUS*, (Gm.) (A), the Red Spur-fowl, a resident, is found in the same parts of the district as *Gallus sonnerati*, and is equally numerous. *GALLOPERDIX LUNULATUS* (Valenc.) (A), the Painted Spur-fowl, a resident, is rare, being found only in the forest near Gokák. *FRANCOLINUS PICTUS* (Jard. and Selby) (A), the Painted Partridge, a resident, is common on most black soil tracts, and is seldom found far from trees. *ORTYGOENIS PONDICERIANUS* (Gm.) (A), the common Gray Partridge, a resident, is very common in the low scrub forests of Gokák and Chikodi; it is less common in the open country.

*PERDICULA ASIATICA* (Lath.) (A), the Jungle Bush Quail, a resident, is common on the Sahyádris and in the eastern scrub forests. *PERDICULA ARGOONDAH* (Sykes) (A), the Rock Bush Quail, a resident, is common in the open east and in bush lands. *MICROPERDIX RYTHORRHYNCHUS* (Sykes) (A), the Painted Bush Quail, a resident, is common but very local, being found only in fields studded with bushes or trees. *COTURNIX COMMUNIS* (Bonn.) (A), the Large Gray Quail, a cold-weather visitant, is common in the open country east of the Sahyádris. *COTURNIX COROMANDELICA* (Gm.) (A), the Blackbreasted Quail, a resident, is common in all grass-lands and fields. *TURNIX TAIGOOK* (Sykes) (A), the Blackbreasted Bustard Quail, a resident, is fairly common in the fields of the scrub forest tracts east of Belgaum. *TURNIX JOUDERA* (Hodgs.) (A), the large Button Quail, is very rare; only one specimen has been obtained. *TURNIX DUSSUMIERI*

<sup>1</sup> Birds marked (A) are game birds.

(Temm.) (A), the Small Button Quail, a resident, is common but very local in grass-lands near Belgaum.

Of GRALLATORES, *EUPODOTIS EDWARDSII* (J. E. Gr.) (A), the Indian Bustard, probably a resident, occurs in the east in Paragad. *SYMPHEOTIDES AURITA* (Lath.) (A), the Lesser Florikin, is common in the hot weather in fields and grass-lands in the open country. Most leave during the rains and cold weather, but a few remain all the year. *CURSORIUS COROMANDELICUS* (Gm.), the Courier Plover, is common in the eastern scrub tracts and in the open country east of Belgaum. *CHARADRIUS FULVUS* (Gm.), the Eastern Golden Plover, probably a cold-weather visitant, is common on all grass-lands all over the district, except on the Sahyádris. *ÆGIALITIS DUBIA* (Scop.), the Common Ring Plover, is common on open grassy expanses generally near ponds, in the plain country. *CHETTUSIA GREGARIA* (Pall.), the Black-sided Lapwing, has been recorded by Captain Butler. *LOBIVANELLUS INDICUS* (Bodd.), the Redwattled Lapwing, a resident, is very common near water from the crest of the Sahyádris inland. *LOBIPLUVIA MALABARICA* (Bodd.), the Yellowwattled Lapwing, a resident, is common everywhere; on the Sahyádris it is commoner than *L. indicus*. It chooses drier ground. *CECENOMUS SCOLOPAX* (S. G. Gm.), the Stone Plover, a resident, does not occur in tall forests, but is otherwise fairly common in the Khánápur and Sahyádris woodlands. *SCOLOPAX RUSTICOLA* (L.) (A), the Woodcock, is rare, appearing only as a straggler in the season of migration in the forests west of Belgaum. *GALLINAGO STHENURA* (Kühl.), (A), the Pintailed Snipe, a cold-weather visitant, comes in September and stays till May. It is very common in the cold weather. When in January the open country begins to dry, it retires to the patches of summer rice in the forest tracts where it stays at least till the hot weather rains set in. *GALLINAGO CÆLESTIS* (Fren.) (A), the Common Snipe, a cold-weather visitant, chooses the same ground as *G. sthenura* but is not nearly so common. *GALLINAGO GALLINULA* (Lin.) (A), the Jack Snipe, a cold-weather visitant, occurs everywhere, but is not nearly so common as the common or pintailed variety. *RHYNCHEA BENGALENSIS* (Lin.) (A), the Painted Snipe, is probably a resident. It is very local as it seems to require much thicker cover than the other snipe and is never found in bare rice-fields. Twenty-five couple of snipe is considered a good bag for one gun in a day.

*NUMENIUS LINEATUS* (Cuv.) (A), the Curlew, a very rare cold-weather visitant, is recorded by Captain Butler from near Belgaum. *MACHETES PUGNAX* (Lin.), the Ruff, is recorded by Captain Butler from Belgaum in the cold season. *RHYACOPHILA GLAREOLA* (Lin.), the Spotted Sandpiper, is common about ponds and rice-fields in the cold season. *TOTANUS OCHROPS* (L.), the Green Sandpiper, is a very common cold-weather visitant. *TRINGOIDES HYPOLEUCUS* (Lin.), the Common Sandpiper, is common in the cold season. *TOTANUS GLOTTIS* (Lin.), the Green Shank, is common in the cold weather. *TOTANUS FUSCUS* (L.), the Spotted Red Shank, is rare but occurs at Belgaum. *HIMANTOPUS CANDIDUS* (Bonn.), the Stilt, is common near most ponds in the cold weather but is somewhat locally distributed. *PARRA INDICA* (Lath.), the Bronzewinged Jacana, a resident, is common in Khánápur.

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*HYDROPHASIANUS CHIRURGUS* (Scop.), the Pheasant-tailed Jacana, probably leaves in the cold weather. It is rarely found in the rains in Khánápur and Belgaum. *PORPHYRIO POLIOCEPHALUS* (Lath.) (A), the Purple Coot, probably a resident, is very locally distributed but is common in the reedy ponds in Khánápur. *FULICA ATRA* (Lin.) (A), the Bald Coot, a resident, is very common, found on almost every reedy pond in the cold weather. *GALLINULA CHLOROPUS* (Lin.), the Common Water Hen, a resident common on weed and lily-covered ponds in Khánápur. *ERYTHRA HÆNICURA* (Penn.), the Whitebreasted Water Hen, a resident, is common in ponds in Khánápur and along river banks. *POREZANA AKOOL* (Sykes), the Brown Rail, one specimen said to have been caught on its nest was found in October at Belgaum. *POREZANA BAILLONI* (Vieill.), Baillon's Crane, a cold-weather visitant, is common all over the district. *HYPOTÆNIDIA STRIATA* (Lin.), the Bluebreasted Rail, occurs in the rains. Captain Butler obtained specimens at Belgaum. *XENORHYNCHUS ASIATICUS* (Lath.), the Black-necked Stork, a rare bird is recorded by Captain Butler from Hubli. *DISSURA EPISCOPA* (Bodd.), the Whitenecked Stork, a resident, is common in the Khánápur forests and Sahyádris as well as in the more open country.

*ARDEA CINEREA* (Lin.), the Common Blue Heron, is very common in the cold weather in the open country near ponds. *ARDEA PURPUREA* (Lin.), the Purple Heron, is rare; one specimen is recorded from Sampgaon. *HERODIAS TORRA* (B. Ham.), the Large Egret, is common everywhere in the cold weather. *HERODIAS INTERMEDIA* (Han.), the Little White Heron, is common in the cold weather throughout the district. *HERODIAS GARZETTA* (Lin.), the Little Egret, is common in the cold weather. *DEMIEGRETTA GULARIS* (Bosc.), the Ashy Egret, probably a resident, is found on river-banks in the better wooded parts of Belgaum, Khánápur, and Gokák; it is not common.

*BUBULCUS COROMANDUS* (Bodd.), the Cattle Egret, a resident, is common in all forest tracts. *ARDEOLA GRAYI* (Sykes), the Pond Heron, a resident, is common everywhere. *BITORIDES JAVANICA* (Horsf.), the Little Green Bittern, a resident, is common on woody river banks. *ARDETTA CINNAMOMEA* (Gm.) the Chestnut Bittern, a resident, is rather rare; it is recorded from Belgaum and Khánápur. *GOISAKIUS MELANOLOPHUS* (Raff.), the Malayan Tiger Bittern, is very rare; one specimen is recorded from the foot of the Rám pass. *NYCTICORAX GRISEUS* (Lin.), the Night Heron, a resident, is locally distributed, but is not rare. *TANTALUS LEUCOCEPHALUS* (Forst.), the Pelican Ibis, is found on the Ghatprabha, and probably occurs on all the larger streams in the cold weather. *INOCOTIS PAPILLOUS* (Temm.) (A), the Wartyheaded Ibis, a cold-weather visitant, is not uncommon in the more open parts in rice fields and along river-banks.

Of NATATOES, *SARCIDIORNIS MELANONOTUS* (Penn.) (A), the Nukhta, probably a visitant, is very rare, occurring occasionally near Belgaum. *NETTOPUS COROMANDELIANUS* (Gm.) (A), the Cotton Teal, is fairly common in the cold season in Khánápur and Sampgaon, and is probably generally distributed. *DENDROCYGNA JAVANICA* (Horsf.) (A), the Whistling Teal, probably occurs only in the rainy season when it is not uncommon. *SPATULA CLYPEATA* (Lin.) (A), the Shoveller, is

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a common cold-weather visitant. *ANAS BOSCHAS* (L.) (A), the Wild Duck, is recorded by Captain Butler from Hubli; it is rare. *ANAS PŒCILORHYNCHA* (Forst.) (A), the Spotbilled Duck, probably a resident, is not uncommon. *CHAULELASMUS STREPERUS* (Lin.) (A), the Gadwall, is a very common cold-weather visitant. *DAFILA ACUTA* (Lin.) (A), the Pintailed Duck, occurs in the cold-weather, but is not rare. *QUERQUEDULA CRECCA* (Lin.) (A), the Common Teal, is a common cold-weather visitant. *QUERQUEDULA CIRCIA* (Lin.), the Bluewinged Teal, is common in the cold-weather. *FULIGULA FERINA* (Lin.) (A), the Redheaded Pochard, a rare cold-weather visitant, is recorded from Hubli by Captain Butler. *FULIGULA NYROCA* (Güld.) (A), the White-eyed Pochard, a rare cold-weather visitant, is recorded by Captain Butler from Belgaum. *FULIGULA CRISTATA* (Lin.) (A), the Tufted Duck, a cold-weather visitant, is recorded by Captain Butler from Belgaum. *PODICEPS MINOR* (Gm.), the Little Grebe, is a common resident. *HYDROCHELIDON HYBRIDA* (Pall.), the Small Marsh Tern, a rare cold weather visitant, is found at Belgaum. *STERNA MELANOGASTRA* (Tem.), the Blackbellied Tern, is a rare cold-weather visitant. *PELECANUS PHILIPPENSIS* (Gm.), the Grey Pelican, is recorded by Captain Butler as shot at Belgaum. *PHALACROCORAX PYGMÆUS* (Pall.), the Little Cormorant, is very common. *PLOTUS MELANOGASTER* (Penn.), the Indian Snakebird, is a common resident.

Snakes are common everywhere, especially on stony ground. The Cobra Naga tripudians, and *Phursa Echis carinata*, are perhaps the commonest of poisonous snakes. Pythons are occasionally seen, and little green snakes, scarcely to be known from the blades of grass in which they lie, are numerous.

Snakes.

Crocodiles are common in all the larger streams. They seldom attack men, but frequently kill goats, and sometimes cows, and even the largest buffaloes. The flesh of the crocodile is eaten by people of the Goll caste, who hunt and kill it in the water. When they have seen a crocodile enter the water, the Golls make a great noise and splash some distance above and below the spot where he is supposed to be. This so frightens the beast that he tries to hide under the first cover he can find in the bed or bank of the river. After some minutes of noise and splashing divers go in search, and, when the animal is found, secure it with nets, or, if it is small, despatch it without the use of nets. The Golls have dogs specially trained to help in securing the game.

Crocodiles.

Fish<sup>1</sup> in abundance, but for the most part small and of little value, are caught in the Malprabha, Tāmraparni, Ghatprabha, and Mārkaṇḍeya, as well as in the smaller streams and ponds. Except during the rainy season floods, which is the breeding or spawning time, fish are caught all the year round. In this way the breeding fish and the fry are to some extent spared, though the fishermen never fail to destroy them when they can get them. The chief fresh-water fish caught in rivers and ponds are the *aval*, *bali*, *bam* or *balvi*, *dhoke*, *godach*, *gácháli*, *ghogre*, *harági*, *hānu*, *kute*, *kavli*, *kulogi*, *kavnya malag*, *muluga purgi*, *sannat* and *thunga*.

Fish.

<sup>1</sup> The fish portion is compiled from Day's Fish and Fisheries, Appendix LII, and LX., and from a contribution from Mr. G. McCorkell, C.S.

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Fish.

The fishery rights of Government and of private persons have never been fixed. The people of the river bank villages net fish for their own use. Besides river-bank villagers there are professional fishers of the Bhoi, Koli, Rajpūt, and Marátha castes. Except Musalmáns, who fish mostly for home use, these fishers catch in order to sell. In addition to fishing they work as servants, palanquin-bearers, basketmakers, and husbandmen. Breeding and young fish are caught in nets made of cotton thread dyed brown with a mesh of about one-sixth or one-fourth of an inch from knot to knot. In and near Belgaum a net called *jhinginjál*, with even smaller meshes, is used for catching prawns and a small fish called *mori* known to Europeans as whitebait. Nets with minute meshes are used during the rains for small fish, and with larger meshes during the cold and hot seasons. Besides these, there are drag-nets *mahájál*, band-nets *charejál*, and stake-nets *kundál*. Besides being netted, fish are trapped in irrigated fields. They are carried in by the rush of water, and once inside, they are easily caught. In the hot weather, the rivers brooks and ponds are dammed and poisonous drugs are thrown into the water, so that the fish either die, or, becoming stupefied, float on the top and are easily caught. This practice of poisoning fish to a certain extent has been stopped in Gokák, as the cutting of the poisonous twigs and leaves has been forbidden. Rod fishing and long line fishing are occasionally resorted to where the water is too deep to dam. Bottom fishing by dragging small pools with a piece of cotton cloth is carried on by persons from the banks throughout the year. Of the fish thus caught, the largest are eaten, but many small fry are left on the banks to die. No fishing boats are employed in any part of the district. Except during the heavy rains when fishing is stopped, none of the rivers have water enough to float a boat much larger than a cockle shell. The bait used is either the common earthworm or grubs found in manure.

All classes of people except Bráhmans, Lingáyats, Jains, Márwár Vánis, Bhátíás, Vaishyas, Gujarát Vánis, and Pancháls eat fish. As the markets are well supplied with salt-fish from Goa and the coast, there is little demand for fresh fish, which are dear and bad. The only exception is near Belgaum, where the European demand exceeds the supply. Local opinion differs as to whether the supply of fish is or is not falling off.